

**REMARKS**

Claims 23-43 are in the application. This Amendment withdraws claims 30-43 as being directed to non-elected inventions, cancels claim 25 without prejudice to eliminate issues, and amends claims 23 and 24 to more positively recite Applicants' patentably novel powder processing method. No claims are allowed or indicated allowable.

Claims 23, 24, and 26-29 are rejected under 35 U.S.C. §103(a) as being unpatentable over the admitted prior art (hereinafter also referred to as "APA") in view of Japanese Unexamined Patent Application Publication No. 63-283767 (hereinafter also referred to as "Japanese '767"). The Office Action alleges that the APA is the process discussed early in the specification, and states that the process discussed does not include the effecting of an excitement treatment, resulting in poor coagulation of the powder. The Office Action continues by alleging that Japanese '767 solves this problem by microwaving the powder during treatment and concludes by alleging that the limitations of the dependent claims are found in APA or would have been obvious process steps only once the basic process was known.

Applicants respectfully traverses the rejection of claims 23, 24, and 26-29 under 35 U.S.C. §103(a) as being unpatentable over the "APA" in view of Japanese '767, however, to eliminate this issue, claims 23 and 24 are amended to more positively recite Applicants' patentably novel powder process steps. More particularly, amended claim 23, on which claims 24 and 26-29 are dependent, recites a powder processing method including, among other things, the steps of:

effecting an excitement treatment on processing target powder for providing an excitation energy to the processing target powder by discharge plasma while effecting a mechanical treatment on the processing target powder for the activation thereof by applying a compressive force and a shearing force thereto as mechanical forces.

Claim 24 is amended to be consistent with amended claim 23. Support for the amendments to claims 23 and 24 is found, among other places, in the pending claims and in

paragraph [0024]. Based on the forgoing, Applicants respectfully request admittance of the amendments to claims 23 and 24, and consideration of claims 23, 24, and 26-29.

The present invention, in accordance with amended claim 23, is directed to a powder processing method, wherein performing the mechanical treatment activates the processing target powder and the entire processing target powder is excited by discharge plasma. In this manner, the processing target powder can be excited in an easy and efficient manner by irradiating the processing target powder with discharge plasma such as glow discharge or arc discharge (see paragraph [0025] of the specification for a more detailed discussion).

Applicants respectfully submit that the combination of the APA and Japanese '767 does not render claims 23, 24, and 26-29 unpatentable. More particularly, APA documents Japanese Unexamined Patent Application Publication No. 63-42728 (hereinafter also referred to as "Prior-Art Document 1"); Japanese Unexamined Patent Application Publication No. 6-134274 (hereinafter also referred to as "Prior-Art Document 2"), and Japanese Unexamined Patent Application Publication No. 5-317679 (hereinafter also referred to as "Prior-Art Document 3") all disclose "effecting a mechanical treatment on the processing target powder for the activation thereof by applying a compressive force and a shearing force thereto as mechanical forces." Applicants respectfully submit that none of Prior-Art Documents 1-3 disclose effecting an excitement treatment on the processing target powder for providing excitation energy to the processing target powder by discharge plasma.

APA document Japanese Unexamined Patent Application Publication No. 2002-154823 (hereinafter also referred to as "Prior-Art Document 4") discloses "a method for manufacturing an inorganic oxynitride by heating the mixture of an oxide and a nitrogen compound." Applicants respectfully submit that the technique disclosed in Prior-Art Document 4 does not involve effecting an excitement treatment on the processing target powder for providing excitation energy to the processing target powder by discharge plasma.

APA document Japanese Unexamined Patent Application Publication No. 2002-140636 (hereinafter also referred to as "Prior-Art Document 5") discloses "a method for

doping a titanium oxide with nitrogen by performing a nitrogen plasma treatment.” Further, Prior-Art Document 5 discloses, in paragraph [0045], that titanium oxide acting as the processing target powder is pressed to solid shape and then the nitrogen plasma treatment is performed. More particularly, Prior-Art Document 5 discloses the technique for performing the nitrogen plasma treatment on a surface layer of a lump of the target comprising the pressed titanium oxide powder, not for performing an excitement treatment for providing excitation energy to the individual processing target powder over the entire target powder by discharge plasma. On the other hand, according to the present invention, the individual processing target powder is treated with discharge plasma over the entire target powder, which allows the entire processing target powder to be excited in the form of powder while the mechanical treatment is performed by applying the compressive force and the shearing force to the target powder. Based on the foregoing, Applicants respectfully submit that the present invention is completely different from the disclosure of Prior-Art Document 5.

APA document Japanese Unexamined Patent Application Publication No. 11-43759 (hereinafter also referred to as “Prior-Art Document 6”) discloses “a method for plasma-spraying a titanium oxide on a substrate by plasma flame of a mixed gas of argon gas and nitrogen gas.” Applicants respectfully submit that the technique of Prior-Art Document 6 does not relate to the technique for effecting an excitement treatment on the processing target powder for providing excitation energy to the processing target powder by discharge plasma.

Applicants respectfully submit that the combination of the APA discussed above and the disclosure of Japanese ‘767 does not render claims 23, 24, and 26-29 unpatentable. More particularly, Japanese ‘767 discloses heating a processing target by microwave; there is no disclosure or suggestion in Japanese ‘767 of heating a process target by discharge plasma.

The Office Action alleges that the limitations of the dependent claims are found in APA or would have been obvious process steps only once the basic process was known (underlining added). Applicants respectfully submit that the method recited in claim 23, which includes, among other things, effecting an excitement treatment on the processing target powder for providing an excitation energy to the processing target powder by discharge

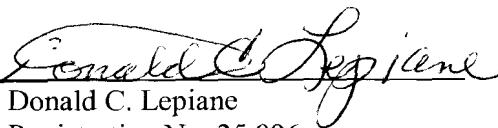
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plasma is a basic process that is not disclosed in APA and Japanese '767. Since Applicants' basic process is not known, the features of Applicants' claims 24 and 26-29 are not known or disclosed.

Based on the forgoing, Applicants respectfully request withdrawal of the rejection of claims 23, 24, and 26-29 under 35 U.S.C. §103(a) as being unpatentable over APA and Japanese '767 and request allowance of claims 23, 24, and 26-29.

Applicants respectfully submit that this Amendment is a sincere effort to place this application in condition for allowance. In the event issues remain, the Examiner is invited to call the undersigned to discuss those issues before further action is taken on the case.

Respectfully submitted,  
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